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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,107	06/25/2003	Gregory O. Jones	12651US02 (20-0140C)	4194

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POSZ LAW GROUP, PLC
12040 SOUTH LAKES DRIVE
SUITE 101
RESTON, VA 20191

EXAMINER

PEREZ GUTIERREZ, RAFAEL

ART UNIT

PAPER NUMBER

2686

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/606,107	Jones et al.	
	Examiner	Art Unit	
	Rafael Perez-Gutierrez	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 18-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 18-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/14/04 & 5/10/05</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This Action is in response to Applicant's amendment filed on February 7, 2005. **Claims 1-16 and 18-28** are now pending in the present application. **This Action is made FINAL.**

Claim Objections

2. **Claims 6, 9, and 16** are objected to because of the following informalities:
 - a) On **line 19** of **claim 6**, insert --and-- after "interface;";
 - d) On **line 3** of **claim 9**, replace "network" with --data-- before "interfaces"; and
 - e) On **lines 13 and 14** of **claim 16**, replace "the transceivers" with --said transceiver--.Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless -- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-16 and 18-28 are rejected under 35 U.S.C. 102(b) as being anticipated by **Wolfe et al. ("Integrated CNI Avionics Using F-22 Modular Products")**.

Consider **claims 1, 3, 6, 9, 16, and 18**, Wolfe et al. clearly show and disclose a method

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for implementing a multifunction electronic radio system and a multifunction electronic radio system comprising:

- a plurality of antenna interface (figure 1); and

- a plurality of self-contained programmable electronic radio system multifunction slices (read in accordance with the language in the specification) (figures 1, 2, and 7 and page 270 right hand column second full paragraph), each of said slices comprising:

- an antenna interface (figure 1);

- a plurality of bi-directional transceivers (i.e., Xmtrs and Rcvrs) coupled to said antenna interface (figure 1 and page 265 right hand column), wherein each of the transceivers is operable over a wide band of frequencies in order to support a wide range of radio function frequencies (figure 1, page 264 left hand column last paragraph (i.e., RF transceivers operate across the VHF, UHF, and L-Band frequency bands), and page 265 right hand column, where it is disclosed that the building block accommodates functional simultaneity);

- a communication, navigation, interrogation (CNI) signal processor (programmable/master processor) coupled to said plurality of bi-directional transceivers (i.e., Xmtrs and Rcvrs), to control operation of the transceivers and to process data transmitted and data received through the transceivers and operable to support at least two independent radio function threads through said plurality of bi-directional transceivers (i.e., Xmtrs and Rcvrs) (figure 1, page 264 right hand column second full paragraph, and page 266 right hand column last paragraph - page 267 left hand column first paragraph); and

- a processing and aircraft (avionics/data) interface (figure 1) coupled to the a

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communication, navigation, interrogation (CNI) signal processor (programmable/master processor) and including an avionics network (data) input for receiving data to be transmitted through the transceivers (i.e., Xmtrs and Rcvrs) and a avionics network (data) output for data received from the transceivers (i.e., Xmtrs and Rcvrs) (pages 266, 269, and 270),

wherein at least one of said transceivers (i.e., Xmtrs and Rcvrs) is coupled to said antenna interface (figures 1 and 3 and pages 266-269); and

wherein the plurality of multifunction slices implements a predetermined set of radio functions (figures 3 and 7 and page 270 right hand column second full paragraph).

Consider **claim 2**, and **as applied to claim 1 above**, Wolfe et al. further disclose that said CNI signal processor is operable to perform a digital signal processing function selected from the group consisting of modulation, demodulation, encoding/decoding, detection, encryption and decryption (figure 1 and pages 264, 266, and 267).

Consider **claim 4**, and **as applied to claim 1 above**, Wolfe et al. also disclose that said at least two radio function threads support radio functions selected from the group consisting of voice radio communication, data network communication, electronic navigation aids, radio beacon detection, global and local grid positioning system detection, and friend-or-foe identification challenging and responding (figures 3 and 4 and pages 266-270).

Consider **claims 5, 7, 8, and 11-15**, and **as applied to claims 1, 2, and 6 above**, Wolfe et al. further show a plurality of antennas, each of said antennas being coupled to an antenna preconditioner, wherein said antenna interface couples externally the multifunction slice to a plurality of antenna preconditioning units (figure 1).

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Consider **claims 10, 21, 22, 24, 25, and 27**, and **as applied to claims 1, 6, 11, and 16 above**, Wolfe et al. also show and disclose that each of said slices further comprises at least one maintenance (inter-slice network) bus connector (inherent) coupled to a maintenance (network) bus to facilitate control and connection of multiple multifunction slices (figure 7 and page 270 right hand column second full paragraph) and that at least two of said slices are interconnected through to form a maintenance (radio network) bus electrically isolated from the transceivers (i.e., Xmtrs and Rcvrs) (figure 1, page 265, and page 267 left hand column - page 269 left hand column).

Consider **claims 19 and 20**, and **as applied to claim 16 above**, Wolfe et al. further disclose that said slices may be reprogrammed in real time to accommodate a plurality of radio functions using minimal allocation of said slices (pages 265-269).

Consider **claims 23, 26, and 28**, and **as applied to claims 6, 11, and 16 above**, Wolfe et al. further disclose an external control bus coupled to the processor of at least one slice to facilitate transmission of control signals directly to radio system components external to slice (figure 7 and page 270 right hand column second full paragraph).

Response to Arguments

4. Applicant's arguments filed on February 7, 2005 with respect to **claims 1-16 and 18-28**, have been considered but are moot in view of the new ground(s) of rejection necessitated by the new limitations added to claims 1, 6, 11, and 16. See the above rejection of claims 1, 6, 11, and

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16 for the relevant citations found in Wolfe et al. disclosing the newly added limitations.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office Action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. Any response to this Office Action should be **faxed to (703) 872-9306 or mailed to:**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

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Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

7. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Rafael Perez-Gutierrez whose telephone number is (571) 272-7915. The Examiner can normally be reached on Monday-Thursday from 6:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Marsha D. Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.


Rafael Perez-Gutierrez

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R.P.G./rpg **RAFAEL PEREZ-GUTIERREZ**
PATENT EXAMINER

May 30, 2005